

Notice of Allowability

Application No.

10/542,498

Examiner

Taylor Victor Oh

Applicant(s)

MORII ET AL.

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/31/07.
2. ☒ The allowed claim(s) is/are 1-25.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Reasons for Allowance

The Status of Claims

Claims 1-25 are pending.

Claims 1-25 are allowable.

III. The following is an examiner's statement of reasons for allowance:

- The objection of Claims 1-30 has been withdrawn due to the modification made in the claims.
- The rejection of Claims 1-30 under 35 USC 112, first paragraph has been withdrawn due to the modification made in the claims.
- The close references for the current invention are Sakie et al (JP3072446) and Sakie et al (JP3223236).

Sakie et al discloses the preparation of dibenzoyl-D-tartaric acid in the following example

5:

108.9g of the salt of (S)-1,2-diaminopropane and dibenzoyl-D-tartaric acid having an optical purity of 91%ee was added into 250ml of water, and then stirred for 1 hour at 70°C. After addition of the salt, the mixture was cooled to 30°C, taking 5 hours. The precipitated crystal was taken out through filtration and dried to obtain 94.4g of a salt of (S)-1,2-diaminopropane and dibenzoyl-D-tartaric acid. This salt was added into 205ml of 9% hydrochloric acid aqueous solution, taking 3 hours. The mixture was stirred for 1 hour, to precipitate dibenzoyl-D-tartaric acid were collected by filtration and rinsed with water. 56g of 50% sodium hydroxide aqueous solution was added into the filtrate and the rinsing liquid for basic solution, and then distilled in atmospheric pressure to obtain 15.3g of a fraction of 115-118 °C. Water content of the obtained (S)-1,2-diaminopropane was 15%(yield 80%). The optical purity was 98%ee.

Sakie et al discloses the preparation of di-p-toluoyl-D-tartaric acid in the following example 5:

99.8g of the salt of (S)-1,2-diaminopropane and di-p-toluoyl-D-tartaric acid having an optical purity of 97%ee was added into 205ml of 9% hydrochloric acid aqueous solution, taking 3 hours. After addition of the salt, the mixture was stirred for 1 hour, to precipitate di-p-toluoyl-D-tartaric acid were collected by filtration and rinsed with water. 56g of 50% sodium hydroxide aqueous solution was added into the filtrate and the rinsing liquid for basic solution, and then distilled in atmospheric pressure to obtain 15.3g of a fraction of 115-118°C. Water content of the obtained (S)-1,2-diaminopropane was 15%(yield 80%). The optical purity was 97%ee.

However, the instant invention differs from the prior art in that none of the prior art disclose that the optically active diacyltartaric acid is added beforehand in the acid aqueous solution; the amount of the optically active diacyltartaric acid is added from 0.05 to 3 wt % based on the wt of the acid aqueous solution ; the recovered optically active diacyltartaric acid is recycled into the optical resolution step; furthermore, there is an unexpected recovery result from 94 to 98 % yield of the desired product in comparison with that (80 % yield) of the prior art. In addition, unless all limitations of the claims are met, there is no prior art rejection. See In re Zurko 59 USPQ 2d 1690 (Fed Cir. 1991) and In re Lee, 61 USPQ 1430 (Fed Cir. 1991).

Therefore, the claimed invention would not have been obvious to the ordinary skilled artisan in the art .

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning the communication after allowance such as sending all post-allowance correspondence should be directed to " Box Issue Fee" or faxed directly to PUBS at 703-305-8755. This will expedite the process of these papers.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TAYLOR VICTOR OF
PRIMARY EXAMINER

11/29/07